

ABSTRACT OF THE DISCLOSURE

The aluminum-free borosilicate glass has a composition in percent by weight based on oxide content of: SiO_2 , 65 - 77; B_2O_3 , 7 - 20; Li_2O , 0 - 2; Na_2O , 0 - 4; K_2O , 3 - 12; MgO , 0 - 2; CaO , 0 - 2; with $\text{MgO} + \text{CaO}$, 0 - 3; BaO , 0 - 3; ZnO , 0 - 2; ZrO_2 , 0.8 - 12; TiO_2 , 0 - 10; CeO_2 , 0 - 1; and F^- , 0 - 0.6. This glass advantageously has a coefficient of thermal expansion α (20°C ; 300°C) of between $3.0 \times 10^{-6} / \text{K}$ and $6 \times 10^{-6} / \text{K}$, good chemical resistance and a working point V_A of between 990°C and 1290°C .